

# Sidewalk Project 2005

## Medina Highway

### Kerrville, TX

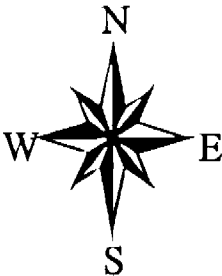
Notes:

- 1. Traffic Control shall be per attached detail TCP (1 - 4a) .
- 2. Concrete shall be 3000 psi
- 3. Steel reinforcement shall be #4 rebar on 18" centers each way per City of Kerrville Standard detail

Approximate Quantities:

- 1310 L.F. Concrete Sidewalk
- 2 TxDOT Curb Ramps
- 2 10ft x 5ft x 1/4" Steel Plate
- 50 L.F. TxDOT Pedetrian Hand Rail
- 1 TxDOT traffic control

Directional  
Install 2 ~~directional~~ curb ramps (TxDOT Type 7 detail sheet PED-02) with truncated-dome surface concrete pavers on the ramp (TxDOT detail sheet PED-02, Detectable Warnings).



Install 1/4" thick galvanized 'diamond' floor plate over existing concrete flume, 10 ft x 5 ft.

Install 1/4" thick galvanized 'diamond' floor plate over existing concrete flume, 10 ft x 5 ft.

S.H. 16

RIO ROBLES RUN E

LOMA LINDA DR E

CHAPARRAL TR E

PEGGY LN S

GSTS

GSTE

650 L.F. 5-ft wide concrete sidewalk per City detail

390 L.F. 5-ft wide concrete sidewalk per City detail

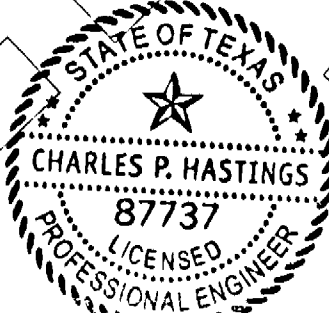
Install 50 L.F. of Pedestrian Rail Type PR-1, see attached TxDOT detail. Mount to existing concrete.

150 L.F. 5-ft wide concrete sidewalk per City detail

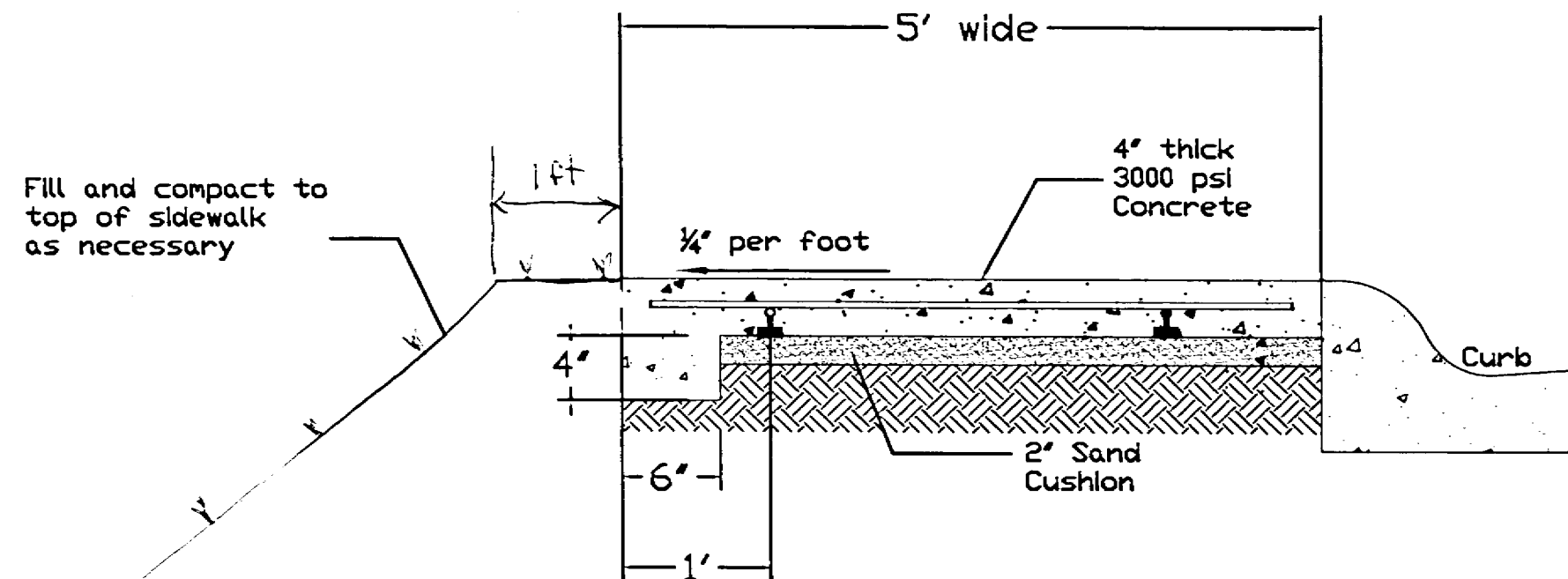
120 L.F. 5-ft wide concrete sidewalk per City detail

Exist. Conc. Flume & Channel

Exist. Conc. Flume



200 0 200 400 Feet



NOTES: Sidewalks will be constructed to comply with all ADA and TDLR standards

Expansion joints ( $\frac{3}{4}$ " ) shall be installed no further than 40 feet apart, dummy joints shall be installed every 10 feet. See City of Kerrville Standard Specifications, *Section 942*, for more details.

1.5"-2" chairs shall be used every 5 LF or as necessary to hold reinforcement while concrete is being placed and shall be placed 1' from outside edge of sidewalk.

## Sidewalk Detail

### City of Kerrville

Standard Specifications

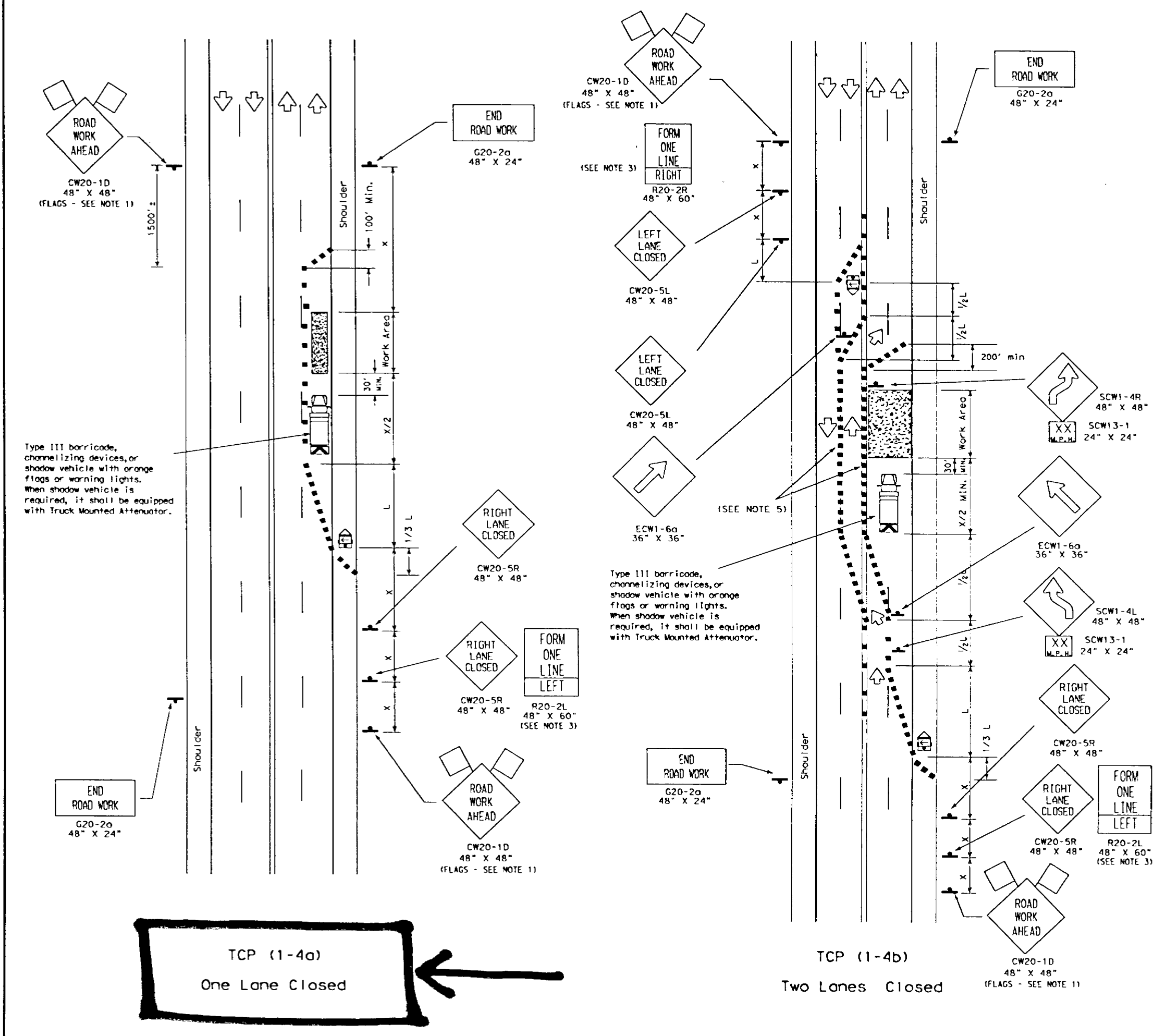
SIZE	FSCM NO.	DWG NO.	REV
SCALE	SHEET 5-2		

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DN:	1
CK:	2
CC:	3
CA:	4

DATE:	11/2/85
ACC:	11/18/85
FILE:	11/22/85



LEGEND

	Type III Barricade		Channelizing Devices		Flag
	Heavy Work Vehicle		Truck Mounted Attenuator		
	Trailer Mounted Flashing Arrow Panel		Portable Changeable Message Sign		
	Flagger		Sign Post		

Posted Speed Sec X	Formula	Minimum Desirable Taper Lengths X X			Suggested Maximum Spacing of Device		Minimum Sign Spacing X Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60' - 75'	120'
35		205'	225'	245'	35'	70' - 90'	160'
40		265'	295'	320'	40'	80' - 100'	240'
45	$L = WS$	450'	495'	540'	45'	90' - 110'	320'
50		500'	550'	600'	50'	100' - 125'	400'
55		550'	605'	660'	55'	110' - 140'	500'
60		600'	660'	720'	60'	120' - 150'	* 600'
65		650'	715'	780'	65'	130' - 165'	* 700'
70		700'	770'	840'	70'	140' - 175'	* 800'

\* Conventional Roads Only  
\*\* Taper lengths have been rounded off.  
L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

- GENERAL NOTES:
- Unless otherwise stated in the plans, flags attached to the signs are REQUIRED.
  - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans.
  - The FORM ONE LANE LEFT sign may be used following the RIGHT LANE CLOSED sign. Spacing distance between signs should be the minimum distance indicated.
  - ROAD WORK AHEAD sign may be repeated if the visibility of the work zone is less than 1500'.
  - If pavement markings are not removed and traffic is directed over a double yellow centerline, the maximum spacing of channelizing devices in a tangent section should be no greater than 10 feet.

Only pre-qualified products shall be used. A list of compliant products and their sources may be obtained by writing or faxing:

Standards Engineer  
Traffic Operations Division - TE  
Texas Department of Transportation  
125 East 11th Street  
Austin, Texas 78701-2483  
Phone (512) 416-3335  
Fax (512) 416-3161  
E-mail TRF-STANDARD@tldgw.dot.state.tx.us

The requirement for shadow vehicles will be listed in the project GENERAL NOTES, Item 502, Barricades, Signs and Traffic Handling.

STANDARD PLANS  
TEXAS DEPARTMENT OF TRANSPORTATION  
Traffic Operations Division

### TRAFFIC CONTROL PLAN

TCP (1-4) - 98

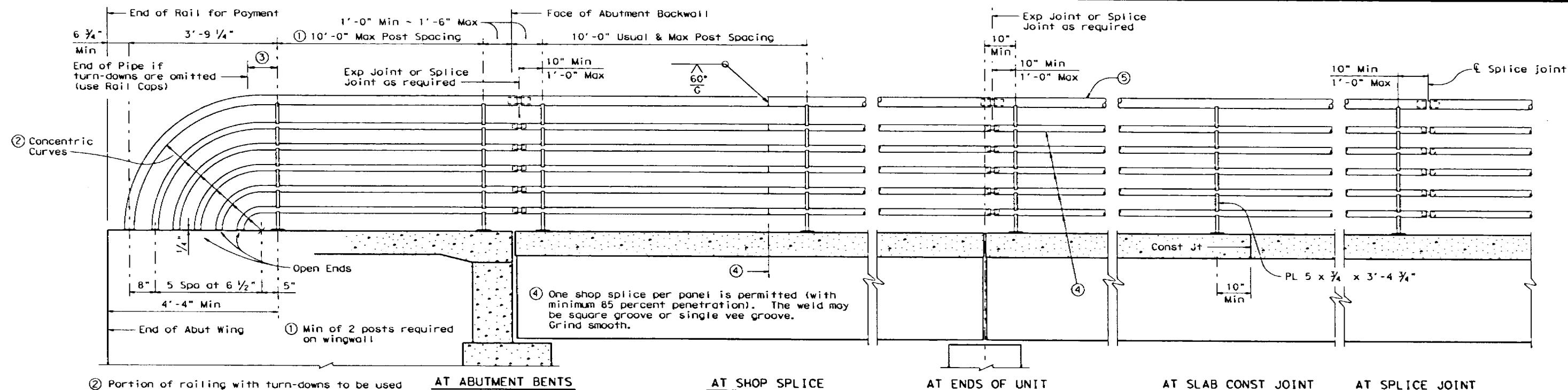
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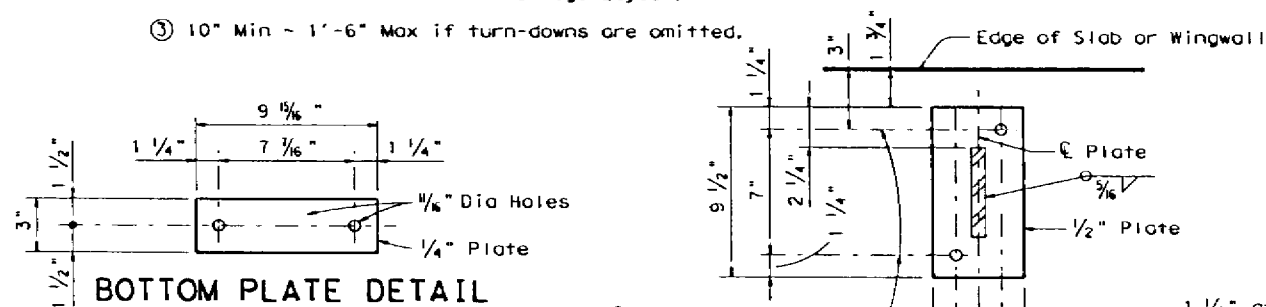
COUNTY	CONTROL	SECTION	JOB	REMARKS

SHEET 5-3

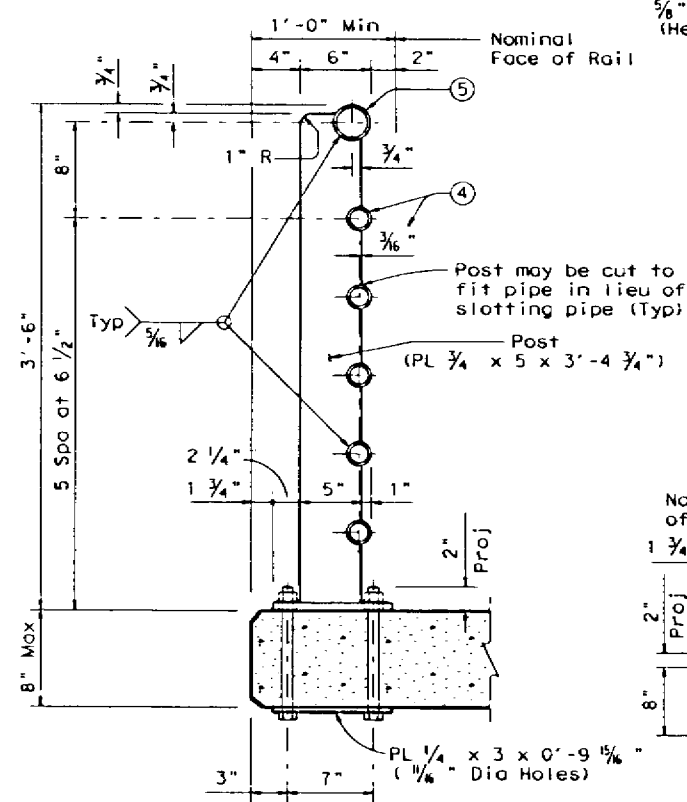
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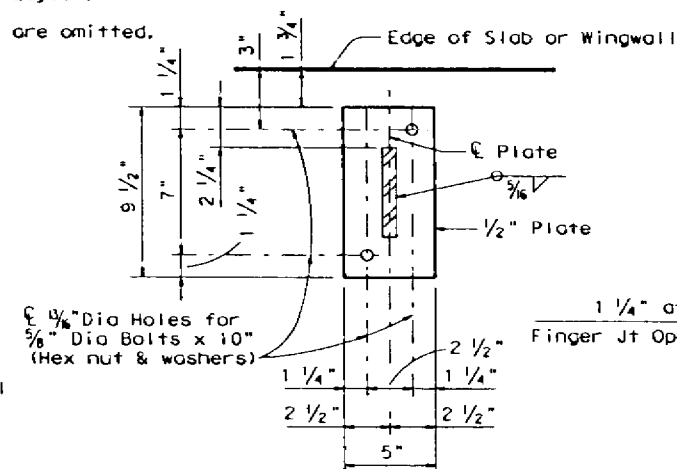
- ② Portion of railing with turn-downs to be used or omitted as indicated on Bridge Layout.
- ③ 10" Min ~ 1'-6" Max if turn-downs are omitted



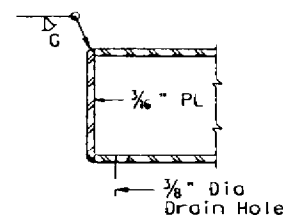
BOTTOM PLATE DETAIL



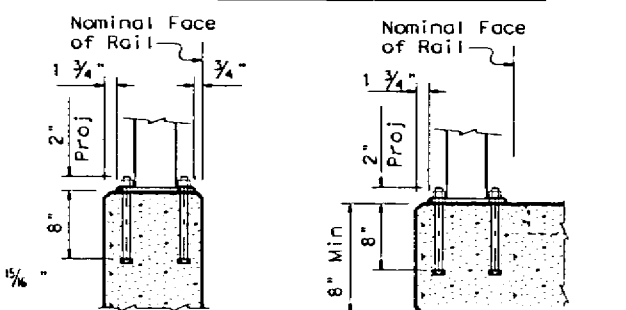
BASIC CONDITION



### BASE PLATE DETAIL



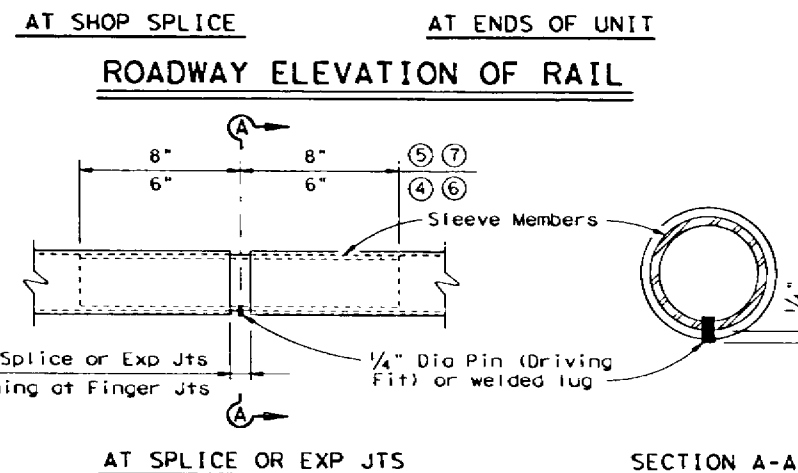
RAIL CAP DETAIL



ON ABUT WING OR  
CAP RETAINING WALL

ON CULVERTS OR  
SLABS OVER 8" THICK

## POST MOUNTING DETAILS



### PIPE SPLICE DETAIL

- ④ 2" Std Pipe (2.375" O.D., 0.154" wall thickness)
- ⑤ 3" Std Pipe (3.500" O.D., 0.216" wall thickness)
- ⑥ 1 1/2" Std Pipe Sleeve (1.900" O.D., 0.145" wall thickness)
- ⑦ 2 1/2" Std Pipe Sleeve (2.875" O.D., 0.203" wall thickness)

GENERAL NOTES:

Designed according to current AASHTO Standard Specifications for Highway Bridges.

Pipe for pipe rail shall conform to ASTM A53 Grade B or A501. Posts and Plates shall be ASTM A36.

All anchor bolts, nuts, washers and bottom plates to be included in unit price bid for railing.

Panel lengths of railing shall be attached to a minimum of three posts except at abutment wingwalls.

All steel components to be galvanized unless otherwise shown in plans.

Anchor bolts shall be  $\frac{3}{8}$ " Dia ASTM A307 Grade A bolts (or A36 threaded rods with one tack welded hex nut each) with one hex nut and one  $1\frac{1}{4}$ " O.D. hardened steel washer at each bolt. Threaded rods may be 0.557" minimum diameter with rolled threads. Nuts shall conform to A563 requirements. The untapped blanks shall be galvanized prior to cutting the threads. Threads for bolts and nuts shall have Class 2A and 2B fit tolerances in accordance with ANSI B1.1.

Face of rail and posts shall be vertical transversely unless otherwise approved by the Engineer. Posts shall be perpendicular to adjacent roadway grade. Grout may be used under base plates if necessary.

Shop drawings to be submitted to the Bridge Engineer for approval will be required only for rails on horizontal curves. In these cases the rail members shall be fabricated to the required radius for radii of 600' or less. For rails not requiring shop drawings, erection drawings showing panel lengths, splice locations, rail post spacing and anchor bolt setting shall be submitted to the Area Engineer for approval.

Exposed edges of pipe rail and pipe rail posts shall be rounded or chamfered to approximately  $\frac{1}{16}$ " by grinding.  
Average weight of railing is 30 pcf.



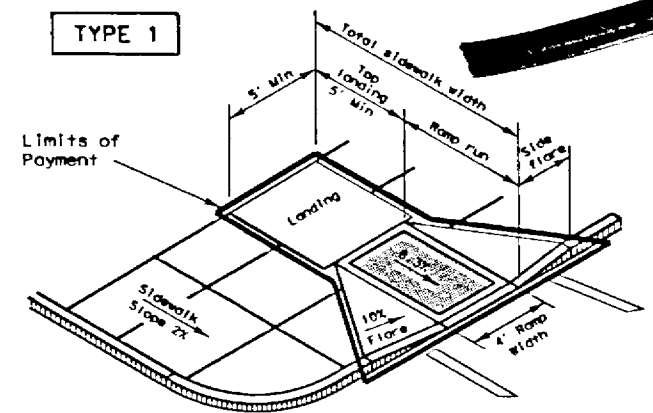
## PEDESTRIAN RAIL

## TYPE PR1

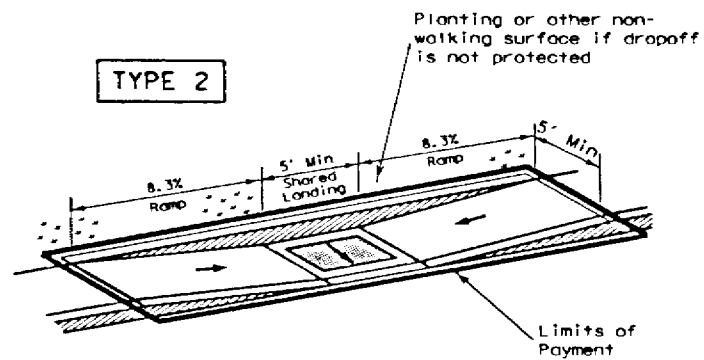
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© TXDOT February 2003	DISTRICT	FEDERAL AID PROJECT		
REVISIONS		SHEETS		
	COUNTY	CONTROL	SECT	JOB

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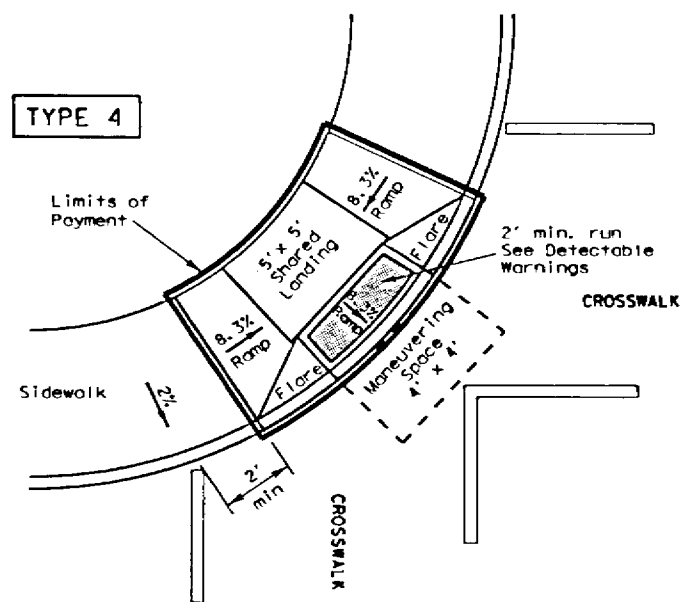
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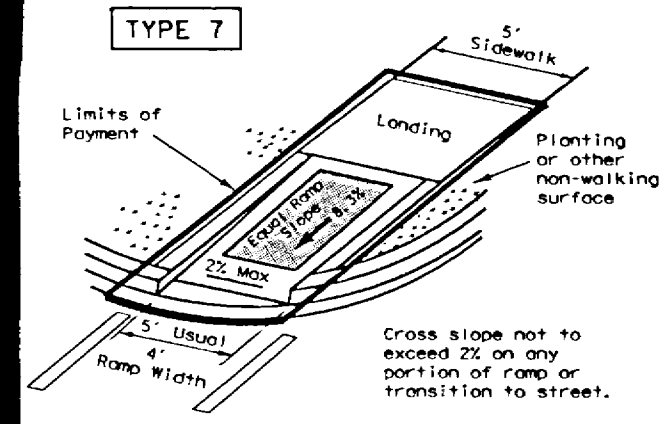
PERPENDICULAR CURB RAMP



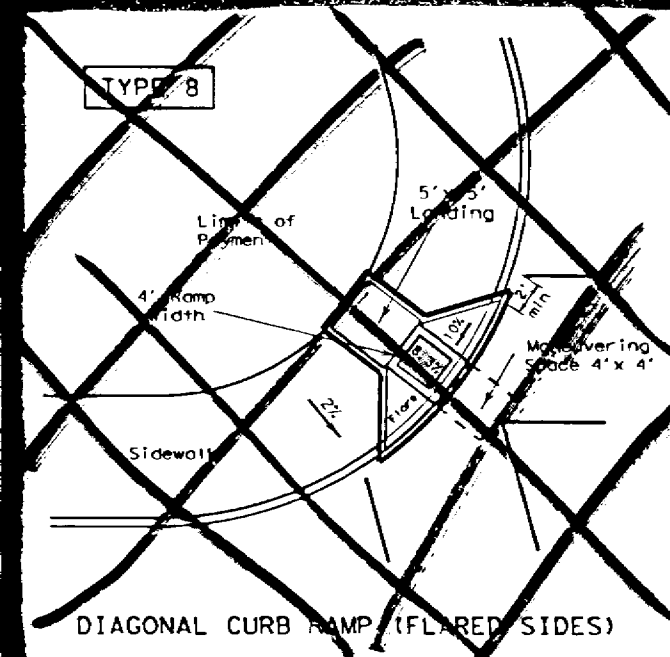
PARALLEL CURB RAMP



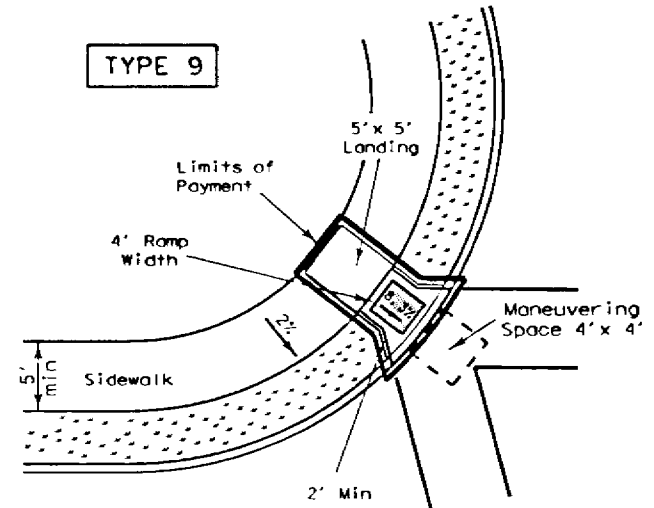
DIAGONAL COMBINATION CURB RAMP  
Perpendicular to the Tangent of the Curb Radius and Contained in Crosswalk



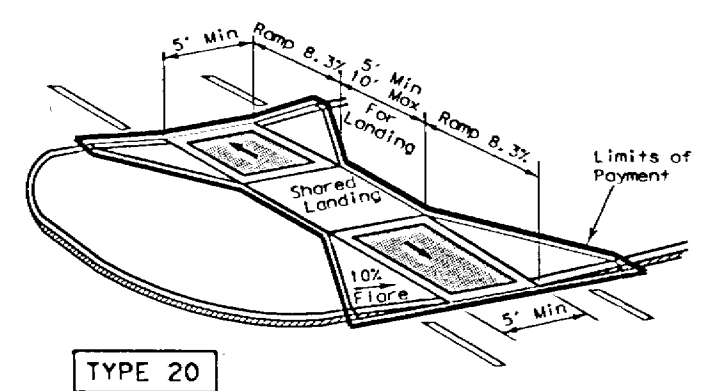
DIRECTIONAL RAMP WITHIN RADIUS



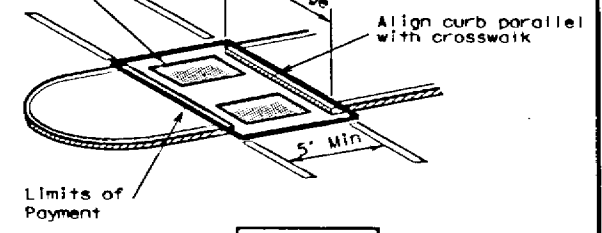
DIAGONAL CURB RAMP (FLARED SIDES)



DIAGONAL CURB RAMP (RETURNED CURB)

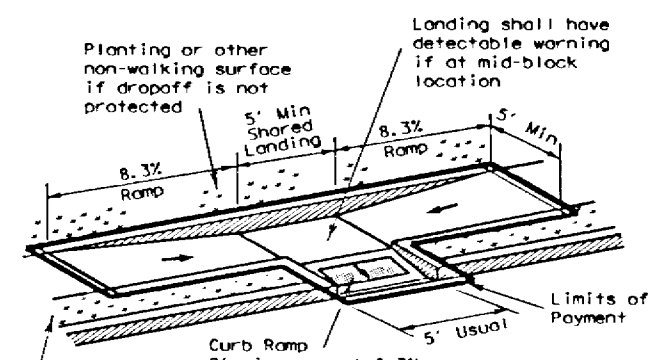


TYPE 20



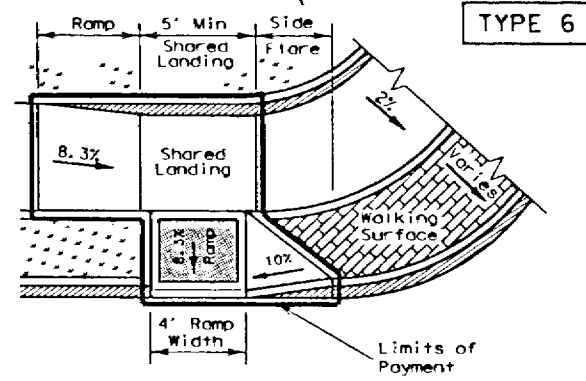
TYPE 21

CURB RAMPS AT MEDIAN ISLANDS



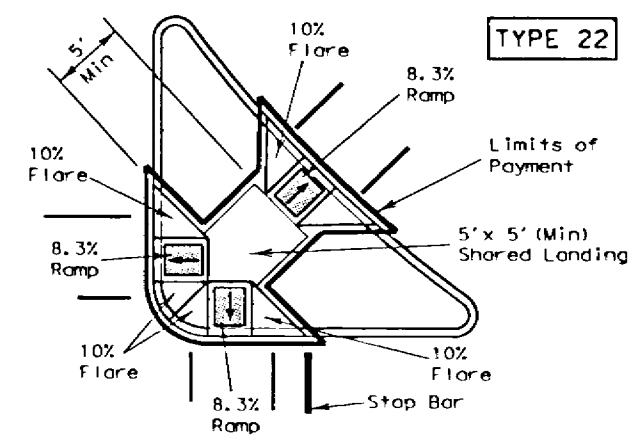
TYPE 3

Planting or other non-walking surface if dropoff is not protected



TYPE 6

COMBINATION CURB RAMPS



TYPE 22

COMBINATION ISLAND RAMPS

General Notes

All slopes are maximum allowable. The least possible slope that will still drain properly should be used. Ramp length or grade of approach sidewalks may be adjusted as directed by the Engineer.

The minimum sidewalk width is 5'. Where a 5' sidewalk can not be provided due to site constraints, a minimum 3' sidewalk with 5' x 5' passing areas at intervals not to exceed 200 ft is required.

Landings shall be 5' x 5' minimum with a maximum 2% slope in any direction.

Maneuvering space at the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.

Maximum allowable cross slope on sidewalk and ramp surfaces is 2%.

Curb ramps with returned curbs may be used only where pedestrians would not normally walk across the ramp. Otherwise, flared sides shall be provided.

All concrete surfaces shall receive a light broom finish unless noted otherwise in the plans.

Ramp textures must consist of truncated domed surfaces. Textures are required to be detectable underfoot. Surfaces that would allow water to accumulate are prohibited.

Additional information on curb ramp location, design, light reflective value and texture may be found in the current edition of the Texas Accessibility Standards (TAS) prepared and administered by the Texas Department of Licensing and Regulation (TDLR).

Raised medians separate opposing directions of traffic and provide a refuge area for pedestrians unable to cross the entire roadway in the allotted signal phase. To serve as a refuge area, the median should be a minimum of 5' wide. Medians should be designed to provide accessible passage over or through them.

Small channelization islands, which can not provide a minimum 5' x 5' landing at the top of ramps, shall be cut through level with the surface of the street.

Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, ramps shall be aligned with theoretical crosswalks, or as directed by the Engineer.

Existing features that comply with TAS may remain in place unless otherwise shown on the plans.

Handrails are not required on curb ramps. Curb ramps shall be provided wherever an accessible route crosses (penetrates) a curb.

Shaded areas indicate locations of detectable warnings. (Color / light reflective value and texture contrast)

Curb ramps and landings shall be constructed and paid for in accordance with Item, "Curb ramp and Landing". Street curb transitions and curb bevels will be paid for in accordance with Item, "Concrete Curb, Gutter and Combined Curb and Gutter".

Texas Department of Transportation  
Design Division (Roadway)

PEDESTRIAN FACILITIES  
CURB RAMPS

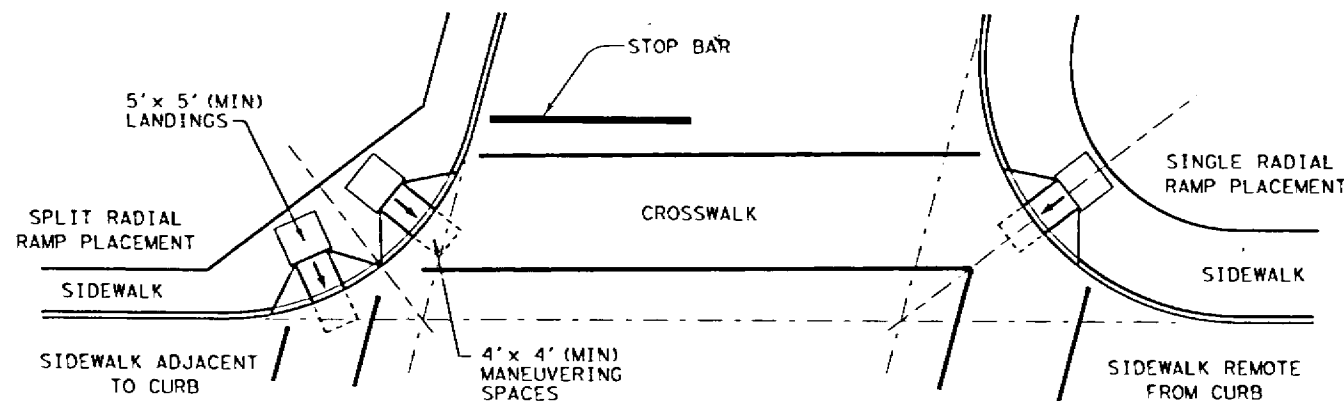
PED-02

SHEET 1 OF 3

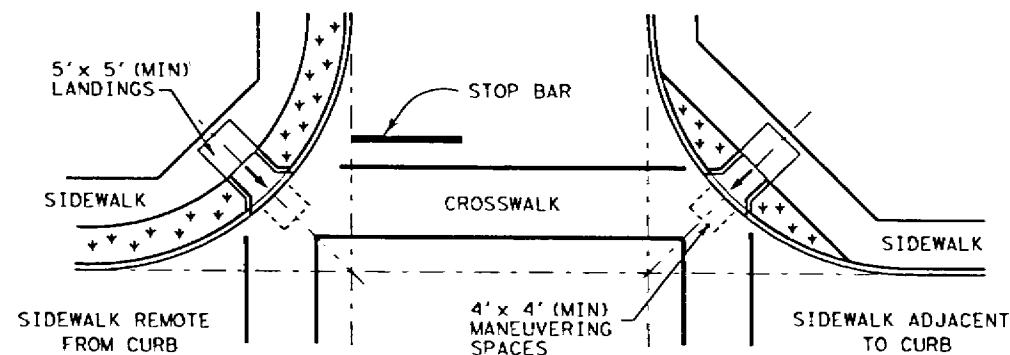
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REVISIONS:	6	COUNTY:	CONTROL SECT:	JOB:	HIGHWAY:

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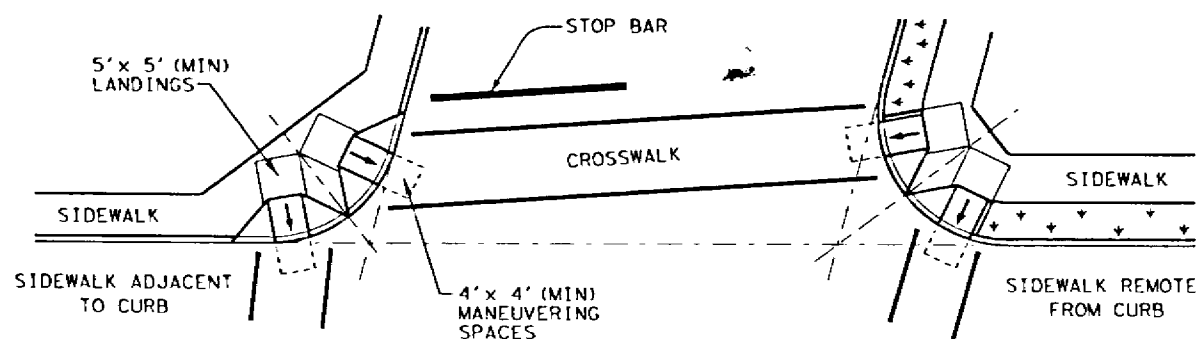
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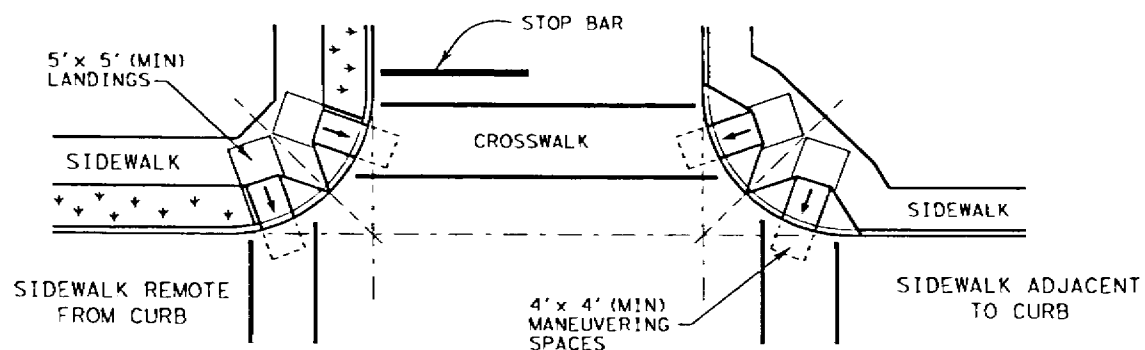
SKewed INTERSECTION WITH "LARGE" RADIUS



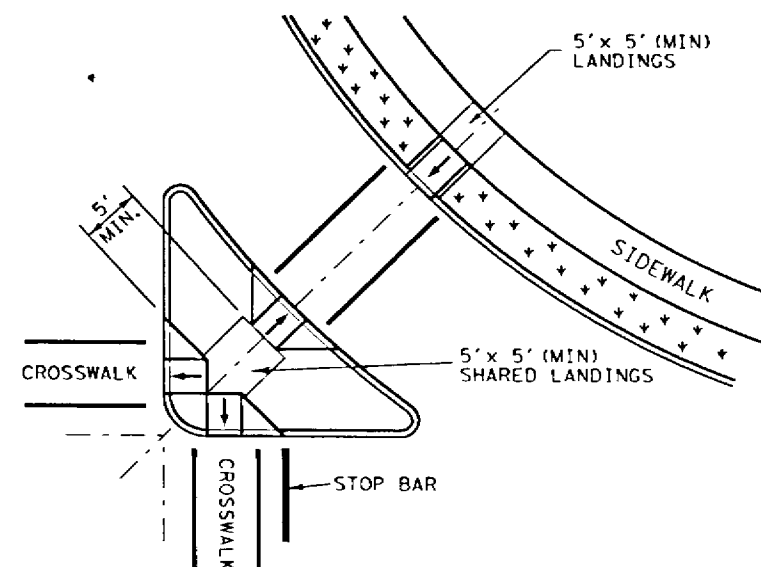
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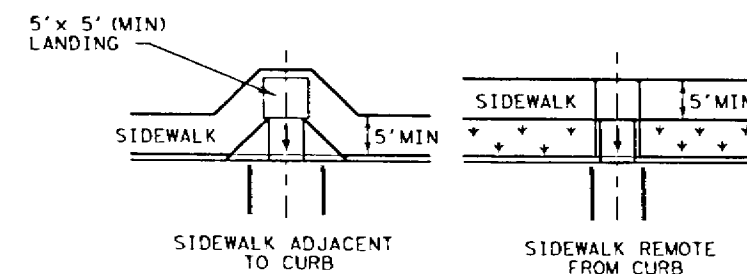
SKewed INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



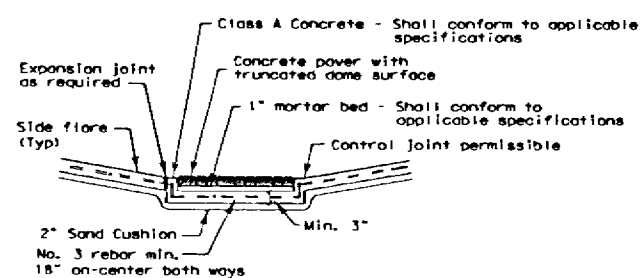
AT INTERSECTION  
W/FREE RIGHT TURN & ISLAND



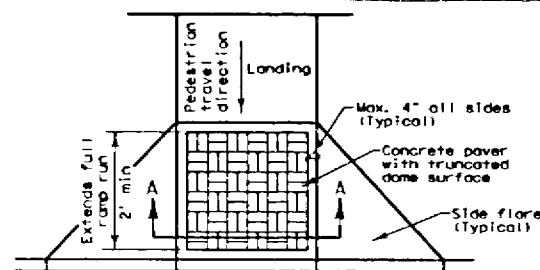
MID-BLOCK PLACEMENT  
PERPENDICULAR RAMPs

## TYPICAL CROSSING LAYOUTS

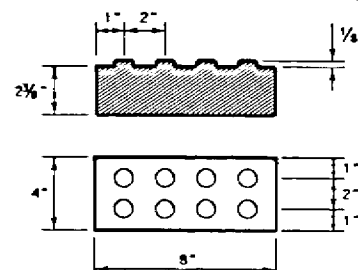
SEE SHEET 1 OF 3 FOR DETAILS AND DIMENSIONS



Section A-A



TYPE A  
Truncated Dome Pattern Curb Ramp  
DETECTABLE WARNINGS



Concrete paver with  
truncated dome surface

### General Notes

Concrete paver units shall meet all requirements of ASTM C-936, C-33, and shall be laid in a two by two basket weave pattern, unless shown otherwise in the plans.

Domes shall be aligned in the direction of pedestrian travel.

Concrete paver units shall have a truncated dome top surface for detectable warning to pedestrians.

Concrete paver unit color for the ramp shall be a contrasting color that provides a light reflective value that significantly contrasts with the adjacent surfaces. The color of the concrete paver units shall be shown elsewhere in the plans. (Adjacent surfaces include side flares).

Concrete paver units shall be saw cut only and any cut unit shall not be less than 25 percent of a full unit.

Texas Department of Transportation  
Design Division (Roadway)

## PEDESTRIAN FACILITIES INTERSECTION LAYOUTS AND DETECTABLE WARNINGS PED-02

SHEET 3 OF 3

FILE: ped02.dgn	DN: MAM	CK: MAM	OWN: BGD	CHK:
© TxDOT March 2002	DIST	FED REQ	FEDERAL AID PROJECT	SHEET
REVISIONS	6			S-6
COUNTY	CONTROL	SECT	JOB	HIGHWAY